

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

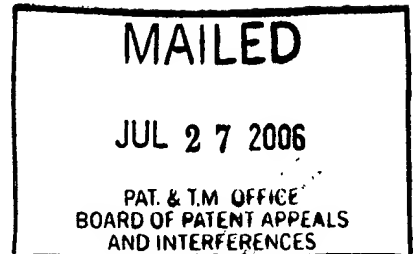
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YASUHIRO MORII

Appeal No. 2006-0613
Application No. 09/588,478

ON BRIEF



Before HAIRSTON, RUGGIERO, and MACDONALD, **Administrative Patent Judges.**

MACDONALD, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 15 and 16.

Claims 1-14 have been withdrawn from consideration (non-elected claims of

April 3, 2002) in response to the restriction requirement of March 8, 2002.

Invention

Appellant's invention relates to a process for fabricating a liquid crystal display to reduce light leakage caused by spacers between layers in the display.

Claim 15 is representative of the claimed invention and is reproduced as follows:

15. A process for fabricating a liquid crystal display, comprising the steps of:

forming a first substrate including a scan signal line, an image signal line, and a plurality of electrodes;

forming a second substrate including a color filter, and a shading membrane;

forming a projecting pattern either at a position corresponding to the scan signal line on one face of the first substrate or at a position corresponding to the shading membrane on one face of the second substrate;

forming an orientation controlling membrane on a face of the first or second substrate on which said projecting pattern is formed;

disposing orientation controlling membranes on the first and second substrate so as to face each other;

defining a gap between the first substrate and the second substrates by disposing a spacer, which is smaller than said gap and having a functional group on the surface thereof, on said projecting pattern, and bringing all spacers disposed at parts other than said projecting pattern into contact only with the orientation controlling membrane of either the first substrate or the second substrate using van der Waals bonding or hydrogen bonding;

forming a panel of an in-plane switching type liquid display by joining said first substrate and said second substrate together with a sealant that is formed at an outer edge between the first and second substrates and a part thereof reaching ends of the first and second substrates to form an injection inlet for injecting liquid crystal;

disposing said panel in a liquid crystal injector in which a container filled with liquid crystal is disposed;

bringing back a pressure of said liquid crystal injector to atmospheric pressure while said injection opening being soaked into liquid crystal in said container, after evacuating air from said liquid crystal injector and said panel; and

sealing said injection opening without any external pressure on said panel, after filling said panel with liquid crystal through said injection inlet utilizing pressure difference.

References

The references relied on by the Examiner are as follows:

Yih	3866313	Feb. 18, 1975
Shimada et al. (Shimada)	5852485	Dec. 22, 1998
Utsumi et al. (Utsumi)	6,441,880	Aug. 27, 2002 (Filed Jan. 29, 1999)
Suzuki	6509948	Jan. 21, 2003 (Filed Nov. 12, 1998)

Rejections At Issue

Claims 15 and 16 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Shimada, Yih, Suzuki, and Utsumi.¹

Throughout our opinion, we make references to the Appellant's briefs, and to the Examiner's Answer for the respective details thereof.²

OPINION

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of the Appellant and the Examiner, for the reasons stated infra, we affirm the Examiner's rejection of claims 15 and 16 under 35 U.S.C. § 103.

Appellant has indicated that for purposes of this appeal the claims stand or fall together. See page 8 of the brief. We will, thereby, consider Appellant's claims as standing or falling together, and we will treat claim 15 as a representative claim thereof.

¹ The Examiner withdrew a second rejection based on a different combination of references (Examiner's answer at page 17).

² Appellant filed an appeal brief on March 29, 2005. Appellant filed a reply brief on August 10, 2005. The Examiner mailed an Examiner's Answer on June 14, 2005.

Whether the Rejection of Claims 15 and 16 Under 35 U.S.C. § 103 is proper?

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the invention as set forth in claims 15 and 16. Accordingly, we affirm.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). See also In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. Oetiker, 977 F.2d at 1445, 24 USPQ2d at 1444. See also Piasecki, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. “In reviewing the [E]xaminer’s decision on appeal, the Board must necessarily weigh all of the evidence and argument.” Oetiker, 977 F.2d at 1445, 24 USPQ2d at 1444. “[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency’s conclusion.” In re Lee, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

With respect to independent claim 15, Appellant argues generally at page 9 of the brief and specifically at page 5 of the reply, that Suzuki “**teaches away** from the claimed invention by requiring freely moving spacers.” We disagree.

Suzuki describes no such requirement. Rather, the requirement is that cell gap is larger than the spacer diameter. Suzuki specifically states, “the rate of occurrence of the light leakage ... reduces rapidly reaching a minimum value when the cell gap ... is larger than the spacer diameter” (col. 7, lines 13-17). That the spacer is free floating does not itself lead to the reduction of light leakage in Suzuki nor does Suzuki so state.

Appellant also argues at page 9 of the brief, “[t]he Examiner has failed to establish that Utsumi inherently teaches ‘bringing all spacers disposed at parts other than said projecting pattern into contact only with the orientation controlling membrane of either the first substrate or the second substrate using [bonding].’” We disagree.

Appellant does not dispute the Examiner’s contention that Utsumi describes an improved spacer with a functional group on the surface thereof. Appellant’s specification at page 23 states that it is the functional group on the spacer that yields the bonding. That is, the bonding is a property of the functional group.

We find Examiner has shown all that is required to establish a prima facie case of obviousness. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). “When the PTO shows a sound basis for believing that the products of the applicant and the prior

art are the same, the applicant has the burden of showing that they are not.” In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 562 F.2d at 1255, 195 USPQ at 433. See also Titanium Metals Corp. v. Banner, 778 F.2d 775, 783, 227 USPQ 773, 779 (Fed. Cir. 1985). Contrary to Appellant’s contention, there is no requirement “the Examiner establish that the inherency of the missing feature would have been recognized by one having ordinary skill in the art.”

Appellant has done nothing more than recognize properties inherent to a spacer having a functional group on the surface thereof. Utsumi shows that such a functional group spacer is already known in the art. While Appellant may have recognized something quite interesting about such spacers, he simply has not invented something new or unobvious. See In re Cruciferous Sprout, 301 F.3d 1343, 1349, 64 USPQ2d 1202, 1207 (Fed. Cir. 2002).

Appellant further argues at page 10 of the brief that even if the Examiner’s inherency argument is proper (which we do hold it to be), the Examiner has missed the claim requirement that “all the spacers not disposed at parts other than said projecting pattern” are brought into contact as claimed. We disagree. Utsumi describes coating the spacers and we find that coating all the spacers is required to maximize the benefits taught in Utsumi. Applying the Utsumi teaching to the Suzuki device also requires that all spacers be coated to maximize the benefits. Suzuki applies the spacers by scattering (col. 7, line 3). Spacers at the light-shielding layer are functional i.e., are compress by the

two layers and separating the layers. All other spacers are non-functional, i.e., free floating and not separating the layers. Since Suzuki does not have a controlled placement of the spacers, all spacers must be coated to guaranty each functional spacer at the light-shielding layer is coated when they are applied by scattering.

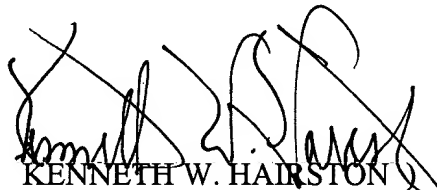
Therefore, we will sustain the Examiner's rejection under 35 U.S.C. § 103.


Conclusion

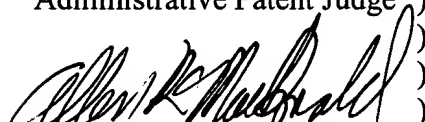
In view of the foregoing discussion, we have sustained the rejection under 35 U.S.C. § 103 of claims 15 and 16.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED


KENNETH W. HAIRSTON
Administrative Patent Judge)


JOSEPH F. RUGGIERO
Administrative Patent Judge)


ALLEN R. MACDONALD
Administrative Patent Judge)

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